

**PATENT COOPERATION TREATY
PCT**

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 12523280/PHH/CJF	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/AU2004/001401	International filing date (day/month/year) 13 October 2004	Priority date (day/month/year) 28 November 2003
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ F42D 3/04, 1/08; E21C 41/28		
Applicant ORICA EXPLOSIVES TECHNOLOGY PTY LTD et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 11 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 28 September 2005	Date of completion of the report 25 October 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer JEFFREY CARL Telephone No. (02) 6283 2543

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001401

Box No. I **Basis of the report**

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1 (b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☐ the international application as originally filed/furnished
- ☒ the description: pages 1-4, 6-8, 14-20, 22-29, 32-35 as originally filed/furnished
pages* 5, 9-13, 13A, 21, 30, 31 received by this Authority on 28 September 2005 with the letter of 28 September 2005
- ☒ the claims: pages 37-45 as originally filed/furnished
pages* as amended (together with any statement) under Article 19
pages* 36 received by this Authority on 28 September 2005 with the letter of 28 September 2005
pages* received by this Authority on with the letter of
- ☒ the drawings: pages 1/9-9/9 as originally filed/furnished
pages* received by this Authority on with the letter of
pages* received by this Authority on with the letter of
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001401**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1-68	YES
	Claims	NO
Inventive step (IS)	Claims 1-68	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-68	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for the purposes of this report:

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|------|--------------|-------|--------------|
| (i) | AU 199919543 | (iii) | US 6520591 |
| (ii) | SU 976751 | (iv) | AU 200053560 |

Claims 1-68:

Claims 1-68 meet the criteria set forth in PCT Article 33(2) for novelty. The prior art published before the priority date does not disclose a method of blasting plural layers of material in a blastfield including rows of blastholes with some of the blastholes passing through all of the layers of material and some of the blastholes passing through only the top layer of material, the method being characterised by having a single cycle of drilling, loading and blasting such that the top layer of material is subjected to a first blast outcome and the other layer(s) of material subjected to a blast outcome different to that experienced by the top layer.

The closest art of citation (ii) discloses a method of open cut mining that involves blasting across different layers of material (7, 8, 10), but the blasting method is aimed at stabilising the slopes at the finished free surfaces (3) of each layer. Innermost blast holes (2, 6, 9) pass through different numbers of layers, with blastholes (2, 6) being inclined to the horizontal so that when the blastfield is detonated, free surface (3) is inclined at different angles for each of the different layers. There is no disclosure of having one blasting outcome within the top layer and a different outcome in the other layer(s).

The claimed invention is also not obvious in the light of any of the cited documents nor is it disclosed in any obvious combination of them. Finally, it is also considered that the claimed invention would not be obvious to a person skilled in the art in the light of common general knowledge either by itself or in combination with any of these documents..